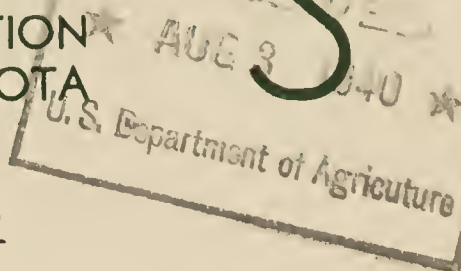


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TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
UNIVERSITY FARM ST. PAUL, MINNESOTA



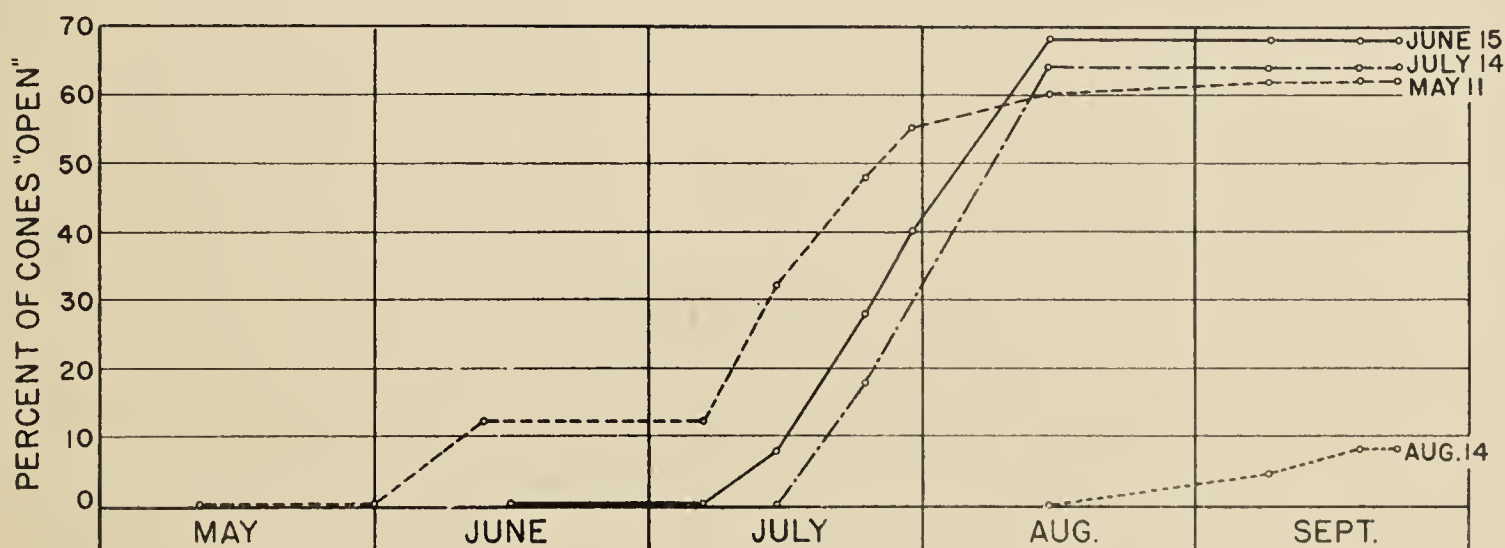
Jack Pine Cones in Slash Open in Midsummer

Since it has been found that jack pine seeds which fall to the ground during the period from early November to early June have a much better chance of germinating and becoming established than seeds that fall during July, August, September, and October (see Technical Note No. 168), a test was made to learn if the time of cutting and scattering the cone-bearing slash influenced the time when the cones opened.

Freshly cut cone-bearing branches were placed at five different distances above the ground at five different dates, as shown in the accompanying table. Whenever a cone opened sufficiently to allow most of its seeds to escape, this was recorded. The percentage of the cones which had opened by September '22 is shown in the table. Each percent value is based upon 40 cones.

Height above ground (inches)	: Percent of cones open wide enough for most of seeds to escape on September 22				
	: Date of cutting				
	: May 11:	June 15	: July 14	: August 14:	September 8
36.....	0	0	0	0	0
18.....	0	5	20	0	0
9.....	10	10	8	0	0
4½.....	20	20	35	0	0
0.....	62	68	64	8	0

The time when the cones on the ground surface opened is shown in the diagram. Cones at the other levels opened at practically the same times but in smaller percentages.



It is possible that some opening might occur during May if the season were dry, but it appears from this test that July and early August is the only period when jack pine cones are certain to open in large numbers.

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